

REMARKS

In the Office Action, the Examiner rejected claims 16 and 19 under 35 U.S.C. § 102(e) as being anticipated by Han et al., U.S. Patent No. 6,399,421, claims 1, 4, 5, and 18 under 35 U.S.C. §103(a) as being unpatentable over Han et al., claims 2, 3, 7, 9, 10, and 11-15 under 35 U.S.C. §103(a) as being unpatentable over Han et al., and further in view of Orcutt, U.S. Patent No. 5,735,030, claim 6 and 17 under 35 U.S.C. §103(a) as being unpatentable over Han et al., and in further view of Su et al., U.S. Patent No. 6,437,429, and claim 8 under 35 U.S.C. §103(a) as being unpatentable over Han et al. and Orcutt, and in further view of Su et al. The rejections are fully traversed below. Reconsideration of the application is respectfully requested based on the following remarks.

Claims 1 and 12 have been amended to further clarify the subject matter regarded as the invention. Claims 3, 4, and 7-11 have been canceled. Claims 1-2, 5-6, and 12-19 are now pending in this application.

PATENTABILITY OF CLAIMS 1-19

Claims 1, 12, and 16 pertain to semiconductor device packages wherein a bonding wire is stitch bonded to both a semiconductor die and a contact lead. Stitch bonding techniques, as opposed to ball bonding techniques, reduce the loop height of bonding wires, thereby reducing the thickness of semiconductor device packages. As described in the previous amendment, stitch bonding involves bonding a wire to a contact point in which the point of a capillary through which the wire is extruded is pressed onto the contact point such that the extruded wire is caught between the contact point and the point of the capillary. Then, the capillary is pressed onto the contact point with sufficient force so that the extruded wire is snipped off and remains bonded to the contact point.

In contrast, none of the prior art references teach a semiconductor device package wherein a bonding wire is stitch bonded to both a semiconductor die and a contact lead. With respect to Han et al., Han et al. describes attaching bonding wires to semiconductor die in very general terms such as “putting on” bonding wires. However, Han et al. does not teach or suggest that the wires are “put on” in any specific manner, whether by stitch bonding or ball bonding. Without any such discussion, a person of ordinary skill in the art would likely understand that Han et al. uses the conventional technique of ball bonding a wire to the semiconductor die and stitch bonding the wire to the contact leads. Therefore without any such discussion, Han et al.

does not teach or suggest stitch bonding to both the semiconductor die and the contact leads.

With regards to the Examiner's Response to Arguments in the latest Office Action, the proposition that the lack of solder balls on dice 42 and 50 shows that stitch bonding is used to attach wires to the semiconductor dice is respectfully traversed. Actually, stitch bonds can be made with or without solder balls, as is shown in the present invention and in Orcutt. See Orcutt, Fig. 3, which shows a stitch bond 20 on top of a ball 21. It is submitted that the nondescript wire bonds illustrated in Han et al. are not intended to identify the specific wirebonding techniques utilized. Therefore, the wirebonding techniques used in Han et al. cannot be conclusively determined.

It is submitted that Han et al., Orcutt, and Su et al., alone or in any combination, do not teach or suggest the features of claims 1, 12, or 16. Therefore, it is submitted that claims 1, 12, and 16 are patentably distinct from the cited references. It is submitted that dependent claims 2, 5-6, 13-15, and 17-19 are also patentably distinct from the cited references for at least the same reasons as those recited above for their corresponding independent claims. Thus, it is respectfully requested that the Examiner withdraw the rejection of claims 1-19 under 35 U.S.C §103(a).

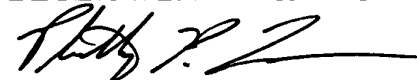
SUMMARY

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. SDK1P007).

Respectfully submitted,

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Application No. 10/039,615
SDK1P007

Page 6 of 6